[0012] **FIG. 2** illustrates an archival system according to an embodiment of the present invention;

[0013] **FIG. 3** is a flow chart of an archive session according to an embodiment of the present invention; and

[0014] **FIG. 4** is a flow chart of an archive selection according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0015] To provide the storage of large amounts of data in the archive system according to the embodiments of the present invention, the data is segmented into information groups and stored onto archival storage media. For instance, data may be accessed from one or more external source(s) and segmented into information groups based on a desired procedure, study or patient.

[0016] FIGS. **1**(*a*)-**1**(*b*) illustrate configurations for storing such information groups in archival storage media by the present archive system. In **FIG. 1**(*a*), retrieved data segmented into information groups **20**A, **20**B, **20**C, **20**D, and **20**E are recorded onto archival storage media **10** and **12**. Four of the information groups **20**A, **20**B, **20**C, and **20**D and an index file **14** including an identifier, a database file, a data program, an image player, and/or other programs files are recorded on the archival storage medium **10** before a predetermined storage capacity is reached on the medium **10**. The index file **14** allows the information groups **20**A, **20**B, **20**C, and **20**D stored on the archival storage medium **10** to be accessed, processed and viewed on a wide range of personal computers and operating systems.

[0017] The archival storage medium **10** is preferably a DVD, which is capable of storing one or more information groups. However, other archival storage media may be used as long as sufficient capacity is provided for storing at least one information group.

[0018] Before recording an information group, the recording processor determines whether the entire information group is able to be stored on the medium without exceeding its storage capacity. In the present illustrative example of **FIG. 1**(*a*), the four information groups **20**A, **20**B, **20**C, and **20**D are recorded onto the archival storage medium **10** without exceeding its storage capacity. In this example, the information group **20**E cannot be recorded on the archival storage medium **10** without exceeding its storage capacity. Therefore, the information group **20**E and an index file **16** including an identifier, a database file, a data program, an image player, and/or other programs files are recorded on the archival storage medium **12** as long as its storage capacity is not exceeded. The index file **16** allows the information group **20**E to be accessed, processed, and viewed independently. This system and storage configuration ensures that each information group and the necessary programs and files to retrieve and view the respective information are entirely stored within one archival storage medium. As a result, each archival storage medium stands alone and is capable of being utilized independent from the other archival storage media so that its information can be accessed, viewed and processed.

[0019] The present archive system also allows for information and subsets of information stored on one or more disks to be accessed and merged to form new information groups. For instance, the information group **20**C from the archival storage medium **10** can be accessed and recorded onto another archival storage medium **30** as illustrated in **FIG. 1**(*b*). Similar to the above described archival storage media, an index file **32** is recorded on the archival storage medium **30** to include an identifier, a database file, a data program, an image player, and/or other programs files for accessing, processing and viewing the information group **20**C.

[0020] **FIG. 2** illustrates an archive system according to one embodiment of the present invention. A user interface (UI) **200** controls the present system for retrieving or receiving information from one or more source(s) **270**. The UI **200** may be a conventional personal computer and the information source(s) **270** may be any type of device or component that supplies the desired data or information in a readable form to the UI **200**. The archive system may be connected with network components **280**, such as workstations, UIs, information sources and other network compatible devices. For example, when the desired data is in the medical environment, the information source(s) **270** may be a readable compact disk (CD) of patient reports or image data (such as CT, MR, CR, X-Ray Angiography and rf, PET, NM, US for example) images from scanners, X-Ray machines and the like.

[0021] The UI **200** communicates with a memory system **210** and a media recorder **260** for storing and recording the information from the information source(s) **270**. The memory system **210** may be a hard disk, redundant array of independent disks (RAID), or external memory devices that are supported by the UI **200**. The memory system **210** provides on-line storage for the initial creation of information file based on the data transfer from the information source(s) **270**. The on-line information stored in the memory system **210** may be later accessed by the UI **200** based on universal naming convention (UNC) path of the memory system **210**. The media recorder **260** is dependent upon the type of archival storage media that is used. When DVDs are used as the archival storage media, the media recorder **260** is a DVD recorder that is supported by the UI **200**. After the DVDs are recorded, they may be physically placed in jukebox storage **220** as represented by the dashed line.

[0022] Due to the storage limitations of the memory system **210**, a jukebox storage **220** is provided for retaining selected ones of the archival storage media. The UI **200** supports and communicates with the jukebox storage. Before the memory system **210** reaches its storage capacity, the media recorder **260** records one or more information groups onto at least one archival storage medium, such as a DVD. After the DVDs are recorded, they are mounted in the jukebox storage **220** such that the information on the DVDs are in "near-line" storage. Thereafter, the information on a DVD mounted in the jukebox storage **220** can be accessed by the UI **200** based on the UNC path of the DVD within the jukebox storage **220**. One or more jukebox storage units may be incorporated into a single archive system.

[0023] Information may be present in the on-line and near-line state at the same time. When near-line information is deleted, the near-line state ends for that particular information. However, such near-line information will not be deleted but will receive an "end" date when the information is no longer valid.